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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/582,451

07/19/2006

James John Schmitt

ACM3027P1US

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27624 7590 08/01/2008  
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EXAMINER

MCGUTHRY BANKS, TIMA MICHELE

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

08/01/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/582,451	<b>Applicant(s)</b> SCHMITT ET AL.	
	<b>Examiner</b> TIMA M. MCGUTHRY-BANKS	<b>Art Unit</b> 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. ____.                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/11/06, 3/26/07</u> .  | 6) <input type="checkbox"/> Other: ____.                          |

## **DETAILED ACTION**

### ***Status of Claims***

Claims 1, 3 and 4 are currently amended, Claims 2 and 5 are as originally filed, and Claims 6-8 are new.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 5 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Johnson (Us 3,554,792).

Johnson teaches a binder comprising an alkali metal silicate and sodium carboxymethyl cellulose (abstract). Regarding Claim 8, the alkali metal is sodium (column 5, line 11).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cobett (US 6,743,275 B1).

Cobett discloses ferrous metal briquettes made from ferrous metal particles. The particles are iron oxides (column 1, lines 32 and 33). The briquettes include alkali metal silicate and other binders such as other silicates (column 2, lines 5-25). Regarding Claim 4, the alkali metal can be sodium. The amount of binder is at most 10% (line 1). In the case where the claimed ranges overlap or lie inside ranges disclosed by the prior art, a *prima facie* case of obviousness exists. See MPEP § 2144.05.

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Claims 1, 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Field et al (US 6,293,994).

Field et al teaches making fired mineral pellets. The pellets include alkali metal silicate in an amount of above 0.08% (abstract). The pellet also includes cellulosic polymers (column 3, lines 5 and 6). Regarding Claims 1 and 3, a *prima facie* case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties. See MPEP § 2144.05 I. Regarding Claim 4, the alkali metal is sodium (column 4, line 2).

Claims 2 and 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Field et al as applied to claim 1 above, and further in view of Allen et al (US 4,728,537).

Field et al discloses the invention substantially as claimed. However, Field et al does not disclose using carboxymethyl cellulose as in Claim 2. Regarding Claim 6, a *prima facie* case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties. See MPEP § 2144.05 I. Regarding Claim 7, the alkali metal is sodium.

Allen et al teaches pelletizing ore. Though Allen et al teaches "a difficulty with powdered cellulosic binders such as carboxymethyl cellulose" in column 2, lines 66 and 67, Allen et al teaches nonetheless that carboxymethyl cellulose is a type of cellulosic binder. According to MPEP § 2141.03, a prior art reference must be considered in its entirety, i.e. as a whole, including portions that would lead away from the claimed invention. It would have been obvious to one of ordinary skill in the art at the time the invention was made to expect that the

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cellulosic binder in Field et al could be carboxymethyl cellulose, since Allen et al exemplifies such in an agglomerated iron ore pellet.

Claims 1, 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pietsch (US 4,116,679).

Pietsch teaches making a briquette from directly reduced finely divided metallized material with 5-15% binder (abstract). Regarding Claims 1 and 3, the binder comprises among other components 15-20% sodium silicate (column 2, lines 43 and 44), which translates to 0.01-0.3%. In the case where the claimed ranges overlap or lie inside ranges disclosed by the prior art, a *prima facie* case of obviousness exists. See MPEP § 2144.05. Regarding Claim 4, Pietsch teaches using sodium silicate.

Claims 1, 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pietsch et al (US 4,105,457).

Pietsch et al teaches a briquette of agglomerated directly reduced metallized particles with a binder consisting of hydrated lime, sodium silicate and water (abstract). The binder composition is 5-15% (Claim 1), and the sodium silicate is 15-45% (column 3, lines 2 and 3), which translates to 0.01-0.07%. Regarding Claim 1, in the case where the claimed ranges overlap or lie inside ranges disclosed by the prior art, a *prima facie* case of obviousness exists. See MPEP § 2144.05. Regarding Claim 3, Pietsch et al teaches sodium silicate. Regarding Claim 4, the range is taught by Pietsch et al.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Vaneý (US 2,596,132) teaches iron ore concentrate pellets with starch and sodium silicate.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TIMA M. MCGUTHRY-BANKS whose telephone number is (571)272-2744. The examiner can normally be reached on M-F 7:00 am - 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Roy King/  
Supervisory Patent Examiner, Art Unit  
1793

/T. M. M./  
Examiner, Art Unit 1793  
1 August 2008

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